

REMARKS/ARGUMENTS

The status of the claims is as set forth in the above listing of the claims. By the present Amendment, claims 1, 14, 21 and 52 are amended. No new matter has been added. Accordingly, claims 1, 4-25 and 51-52, as herein amended, remain pending in the present application. Reconsideration and allowance of all pending claims is respectfully requested.

I. CLAIM AMENDMENTS

In the Advisory Action mailed January 30, 2007, the Examiner states that the Applicants' arguments of patentability over the cited references is not persuasive because the term "wet-laid" is allegedly not supported by the original disclosure and thus the Applicants' arguments allegedly rely on "on a process limitation outside the scope of the disclosure." The Applicants disagree with the Examiner's assertion that the industry term "wet-laid" is not supported by the original disclosure. The original specification describes in detail nonwoven articles whose structure is expressly defined by dewatering a fiber-containing slurry through a forming wire. (See page 2, lns. 1-11; page 7, ln. 15, to page 8, ln. 7). Any person skilled in the pertinent field of art understands the term "wet-laid" to define such a construction of a nonwoven article. In fact, this is so clearly the case that amendment of the claims to include the term "wet-laid" was expressly suggested by the prior Examiner on this application in the Interview Summary mailed February 2, 2006. However, although further amendment of the claims to remove the very term suggested by the USPTO represents an unnecessary step backwards in the prosecution of the present application, the Applicants have nonetheless amended the claims to remove the term "wet-laid," and have replaced that term with express language from the specification that unmistakably defines the structure of a nonwoven article. Accordingly, independent claims 1

and 14 now recite first and second surfaces comprising “nonwoven fibers dewatered from a slurry,” and the structure of these surfaces is not taught or suggested by the prior art, as discussed in further detail below.

II. REJECTIONS UNDER 35 U.S.C §102

The Examiner has rejected claims 1, 4-9 and 12 under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent 4,250,221 to Pfeffer. In response, the Applicants respectfully assert that Pfeffer does not disclose each and every element of independent claim 1. Specifically, claim 1 recites first and second surfaces of “nonwoven fibers dewatered from a slurry.” In contrast, Pfeffer discloses “yarns, strands, or slivers 12 and 13” positioned within a base 11 formed of nonwoven fibers. (Col. 6, lns. 63-65). It is well known in the pertinent industry, and the Applicants respectfully request that the Examiner take official notice of as much, that fibrous yarns, strands and slivers are not formed from nonwoven fibers dewatered from a slurry. The following definitions of these industry terms may be found in the “Glassfiber Reference Guide” published by Advanced Glassfiber Yarns LLC, which has been submitted in an Information Disclosure Statement.

As found in this Guide (pgs. 10-11), a “strand” is a “single fiber, filament or monofilament. An ordered assemblage of textile fibers having a high ratio of length to diameter and normally used as a unit including slivers, rovings, single yarns, plied yarns, cords, braids, ropes, etc.” Thus, when formed as an ordered assemblage, it is not formed by a nonwoven process comprising dewatering a fiber-containing slurry. A “yarn” is a “generic term for a continuous strand of textile fibers, filaments or material in a form suitable for knitting, weaving or otherwise intertwining to form a textile fabric.” Thus, since yarns are knitted, woven, etc.,

they are not formed by a nonwoven process comprising dewatering a fiber-containing slurry. A “sliver” is defined as “[o]verlapping and parallel staple fibers that have been gathered into a loose, continuous bundle.” More generically, slivers are cut pieces of yarns, and are thus also not formed by a nonwoven process comprising dewatering a fiber-containing slurry. Moreover, Pfeffer clear identifies the distinction between nonwoven chopped fibers and the fiber “yarns, strands, or slivers” used inside his mat. (Col. 8, Ins. 3-6).

Based on the above definitions, it is clear that the “yarns, strand, or slivers 12 and 13” in Pfeffer do not provide a “first surface comprising a pattern formed of nonwoven fibers dewatered from a slurry to lay directionally aligned in a plurality of crossing linear formations,” as is required by present claim 1. As a result, Pfeffer does not anticipate each and every element in independent claim 1, nor its dependent claims. Accordingly, the Applicants respectfully request that the Examiner withdraw the §102 rejections with respect to the present claims.

III. REJECTIONS UNDER 35 U.S.C §103

The Examiner has also rejected claims 1, 4-9, 11-18, 20-25, 51 and 52 under 35 U.S.C. §103(a) as allegedly obvious and thus unpatentable over U.S. Patent 5,158,824 to Gill, *et al.* in view of Pfeffer. The Applicants respectfully assert that the combination of Gill with Pfeffer does not teach or suggest each and every element of present independent claims 1 and 14. In response to a prior rejection based on Gill, and in accordance with the express suggestions by the prior Examiner on this application, independent claims 1 and 14 were amended to further clarify the structure and relationship of the first and second surfaces in the presently claimed nonwoven article. Specifically, claim 1 was previously amended to recite that the second surface of the present nonwoven article is “a second surface *opposed to and coextensive with* the first surface.”

Claim 14 was amended in a similar manner, and these amendments were expressly stated to be sufficient to overcome Gill as prior art in the Interview Summary of September 20, 2006.

A. Gill does not teach a second surface of nonwoven fibers dewatered from a slurry “opposed to and coextensive with the first surface” of random nonwoven fibers dewatered from a slurry

As acknowledged in the Office Action mailed November 27, 2006, it is agreed that Gill does not teach a nonwoven article having a second surface “opposed to and coextensive with the first surface.” (Office Action of 11/27/06, pg. 4). In contrast, the material produced by Gill contains directionally oriented fiber throughout its entire finished thickness. Stated another way, the directionally aligned fibers in Gill are being formed simultaneously with the randomly dispersed fiber, and thus cannot form two distinct outer surfaces of a mat, one surface of directionally aligned nonwoven fibers opposed to and coextensive with another surface of randomly dispersed nonwoven fibers. Therefore, the directionally aligned fibers of Gill’s mat extend basically through the entire thickness of the formed material since they are formed simultaneously, and thus do not provide a second surface of nonwoven fibers “opposed to and coextensive with the first surface” of random nonwoven fibers.

B. Pfeffer also does not teach a second surface of nonwoven fibers dewatered from a slurry “opposed to and coextensive with the first surface” of random nonwoven fibers dewatered from a slurry

The prior Office Action then relies on Pfeffer for teaching a nonwoven article having a second surface “opposed to and coextensive with the first surface.” Initially, however, Pfeffer does not teach two opposing coextensive surface of “nonwoven fibers dewatered from a slurry,” as discussed in detail above in Section II and as required by claims 1 and 14. Secondly, Pfeffer also does not teach or suggest the presently claimed “opposing surfaces.” Instead, Pfeffer

teaches the forming of strands 12 and 13 *within* a nonwoven base 11. Thus, the base 11 and strands 12 and 13 are not “opposing” as required by claims 1 and 14 because strands 12 and 13 are formed *within* the base. Still further, even if the base and strands were somehow found to be “opposing,” the strands do not provide a “surface” of the mat, as required by claims 1 and 14. As a result, neither Gill nor Pfeffer, nor the combination of the two, teaches:

- (1) first and second surfaces of “nonwoven fibers dewatered from a slurry”;
- (2) the second such surface is “opposed to and coextensive with the first surface”; or
- (3) first and second layers that even comprises “surfaces” of a nonwoven article.

Accordingly, combining these two references still falls short of teaching or suggesting all of the elements in claims 1 and 14, as amended herein.

C. There is no motivation to combine Gill and Pfeffer because the equipment and process in Gill cannot be combined with the equipment and process in Pfeffer

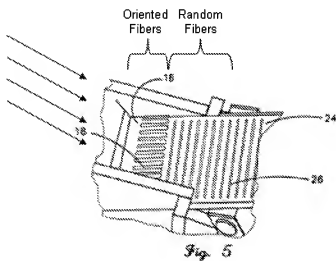
In addition to neither Gill nor Pfeffer teaching or suggesting all of the elements of the present claims, there is no motivation to combine Gill with Pfeffer because to do so would frustrate the disclosed manufacturing processes of each reference. The disclosed process in Gill that results in a mat with directionally oriented fibers throughout the mat could not be combined with Pfeffer to provide a mat with opposing coextensive surfaces of fibers. This physical characteristic of Gill’s mat is the necessary result of the manufacturing equipment and process disclosed therein:

As illustrated in FIG. 2 a flat water resistant sheet 16 is fastened to the headbox 2 covering a portion of the dewatering area. The sheet 16 has a number of longitudinal slots formed therein and is positioned in close proximity to the continuous traveling forming belt 8 as it passes through the headbox 2. As a result of the continuous forward movement of the traveling forming belt 8 as the

vacuum from the vacuum boxes 10 is applied to the bottom of the continuous traveling forming belt 8 drawing the water from the headbox 2 through the continuous traveling forming belt 8, the dispersed fibers 3 are deposited through the slots 18 of the flat slotted sheet 16 on the top of the continuous traveling forming belt 8 and oriented to the shape and size of the slots 18. Since the continuous traveling forming belt 8 is in continuous movement the fibers deposited within the slotted areas 18 of the sheet 16 are oriented in the direction of travel of the continuous traveling forming belt 8. The fibers deposited in the dewatering area 7 of the forming section or headbox 2 not affected by the sheet 16 are deposited on the continuous traveling belt 8 in a random manner.

(Gill, Col. 3, lns. 17-38; emphasis added).

As described in the above passage from Gill, a portion of the dewatering area (where the chopped fibers are dispersed towards the forming belt) is covered by the directionally-orienting slots 18, while the remaining portion of the dewatering area is not covered. The slurry of fibers, binder material, and water are then deposited as shown by the arrows below, with reference to Fig. 5 of Gill:



Fibers dispersed via the slot-covered portion 16 of the dewatering area are directionally aligned (first bracket), while in the dewatering area not covered by portion 16, the fibers are dispersed in

random directions. As a result, since both randomly dispersed and directionally aligned fibers are fed through the dewatering area at the same time while the forming belt 8 is continuously moving, not only are two surfaces that are opposed to and coextensive with each not formed by Gill, but the equipment in Gill could not be used to form such a structure. Thus, to combine any opposing surfaces found to be taught by Pfeffer with Gill's material and process would vitiate both Gill's equipment and process. Nothing in the references would motivate Gill abandoning the very (and likely only) process and equipment that could form his mat. Likewise, the process in Pfeffer is to combine pre-formed yarns or strands into the center of a nonwoven material. Gill's equipment and process cannot be used with pre-formed yarns and strands since these pieces would likely clog-up Gills slot-covered portion 16. Moreover, there is nothing in Pfeffer that would motivate one skilled in the art to abandon the use of pre-formed yarns and strands, and to instead adopt Gill's manufacturing equipment to produce a solely nonwoven material.

While it is acknowledged that the Examiner believes that the motivation for combining Gill with Pfeffer would be to "improve structural strengthening and resist tearing and breaking," to combine these two references would result in the frustration of the purpose of both references. "The proposed modification cannot render the prior art unsatisfactory for its intended purpose." M.P.E.P. 2143.01(V). Therefore, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed combination. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Thus, no matter what alleged efficiency or strength-improving motivation the Examiner can envision, both the MPEP and the Federal Circuit expressly forbid a motivation to be present if the combination would render the prior art unsatisfactory for its intended purpose.

As discussed above, Gill's entire equipment and process is designed and dedicated to form a completely nonwoven material having directionally oriented fibers throughout the entire thickness of the finished mat (as opposed to only on one outer surface of the mat). If Pfeffer is combined with Gill, then both Gill's equipment and process could no longer be used since it cannot create any opposing coextensive surfaces that are believed to be taught in Pfeffer because the two "surfaces" in Pfeffer are not both constructed of nonwoven fibers. Thus, the entire purpose of Gill (to form an entirely nonwoven material) would be frustrated by a combination with Pfeffer, even if Pfeffer is found to provide two opposing coextensive "surfaces." Likewise, Pfeffer's mat could not be constructed with Gill's process, and there would be no motivation to attempt this since Pfeffer does not make an entirely nonwoven material, and since Pfeffer already provides his own type of directionally oriented fibers (strands 12 and 13). Thus, it would also frustrate the purpose of Pfeffer (to place yarns/strands within a nonwoven material) to abandon use of his pre-formed strands in an attempt to combine manufacturing processes with Gill. As the Examiner is no doubt aware, and as emphasized by the holding of the Federal Circuit in *In re Gordon*, teachings in a reference cannot be viewed in a piecemeal fashion; rather, the entire teaching of a reference must be viewed as whole.

D. Conclusion

In accordance with the above discussion, Gill, Pfeffer, or a combination of the two, does not and cannot teach or suggest all of the elements of independent claims 1 and 14. As discussed above, Gill does not disclose a nonwoven article having each and every element recited in independent claims 1 and 14, and this point is confirmed in the prior Final Office Action. In addition, since Pfeffer also does not provide first and second *opposing coextensive surfaces* of

nonwoven fibers dewatered from a slurry, Pfeffer does not cure the deficiencies of Gill, and therefore even the combination of Gill and Pfeffer does not teach or suggest all the limitations of independent claims 1 and 14. Furthermore, even if Pfeffer is somehow found to teach *opposing coextensive surfaces*, a combination of Gill with Pfeffer would be improper because the combination would render the processes of both references inoperable for their intended purposes. As a result, the combination of Gill with Pfeffer does not render independent claims 1 and 14 obvious, nor does it render their respective dependent claims obvious. Accordingly, the Applicants respectfully request that the Examiner also withdraw the §103 rejections of the pending claims.

E. Dependent claims rejected on the combination of Gill and Pfeffer

The Examiner has also rejected claims dependent claims 7-10, 18, 19 and 25 under 35 U.S.C. §103 as allegedly obvious and thus unpatentable over Gill and Pfeffer, and further in view of U.S. Patent 4,258,098 to Bondoc. The Applicants respectfully assert that these dependent claims are not obvious in view of this combination of references since these dependent claims depend from independent claims 1 and 14, respectively. As discussed above, the combination of Gill and Pfeffer is improper and does not teach or suggest all of the elements recited in independent claims 1 and 14. As a result, Gill and Pfeffer do not teach or suggest all of the elements of dependent claims 7-10, 18, 19 and 25, which respectively depend from claims 1 or 14. Moreover, Bondoc does not cure the deficiencies of Gill and Pfeffer, and is only relied upon for teaching specific components of binder materials. Thus, claims 7-10, 18, 19 and 25 are also not obvious in view of Gill, Pfeffer and Bondoc, and the Applicants therefore respectfully request that the Examiner withdraw the §103 rejection with respect to these dependent claims.

IV. CONCLUSION

The Applicants respectfully submit that all pending claims are in condition for allowance, and request a Notice of Allowability for the pending claims. The Examiner is invited to contact the undersigned Attorney of Record if such would expedite the prosecution of the present application.

The three-month response deadline to the prior Final Office Action is set to expire on February 27, 2006; thus, this Amendment is timely. In addition, the Applicants are filing a Request for Continued Examination, along with the required fee. If further fees are due, or an overpayment has occurred, the Applicants hereby authorize the Director to charge or credit such amount to Deposit Account No. 13-0480, referencing the Attorney Docket Number specified herein.

Respectfully submitted,

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